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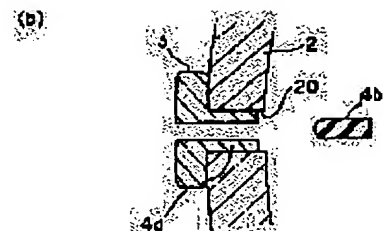
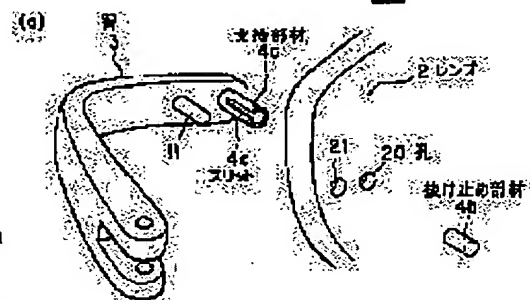
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## (54) SPECTACLES

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide spectacles which are capable of maintaining the connecting state of spectacle parts connected to lenses or rims stably for a long period and may be easily assembled.

**SOLUTION:** A supporting member 4a joined by brazing is integrally constituted at the end of an endpiece 3. The supporting member 4a is inserted into a hole 20 formed at the lens 2. A self-locking member 4b is pushed and fitted to the supporting member 4a in the state that the supporting member 4a is inserted into the hole 20, by which the supporting member 4a is fixed to the lens 2.



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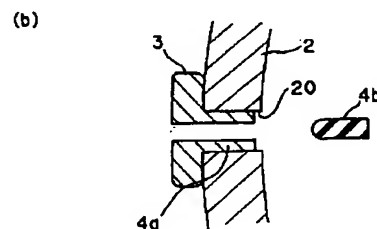
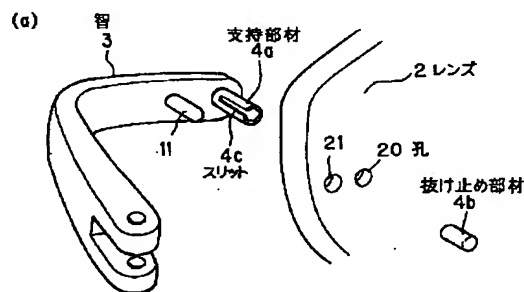
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(54) 【発明の名称】 眼鏡

(57) 【要約】

【課題】 レンズ或いはリムに対して連結される眼鏡部品の連結状態を長期間安定して維持可能とし、また組立の容易な眼鏡を提供する。

【解決手段】 智3端部にはろう付けされて接合された支持部材4aが一体的に構成されており、この支持部材4aがレンズ2に設けられた孔20に挿入され、この孔20に支持部材4aが挿入された状態で支持部材4aに抜け止め部材4bが押し込まれて嵌合し、支持部材4aがレンズ2に対して固定される。



## 【特許請求の範囲】

【請求項 1】 レンズ或いはリムと眼鏡部品とを連結する眼鏡において、

レンズ或いはリムに設けた孔に挿入されると共に、ブリッジ部、智、バットアーム部、テンプル部の内少なくとも 1 つの眼鏡部品に接合された支持部材と、

該支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定させる抜け止め部材と、を備えたことを特徴とする眼鏡。

【請求項 2】 前記支持部材は筒形状に設けられ、前記抜け止め部材は前記支持部材の筒内部に押し込まれることを特徴とする請求項 1 に記載の眼鏡。

【請求項 3】 前記支持部材はスリットを備えたことを特徴とする請求項 2 に記載の眼鏡。

【請求項 4】 前記支持部材は筒内部に段落ちを形成したことを特徴とする請求項 2 又は 3 に記載の眼鏡。

【請求項 5】 前記支持部材は板を折り曲げて筒形状に形成されたことを特徴とする請求項 2、3 又は 4 に記載の眼鏡。

【請求項 6】 前記支持部材及び前記孔の断面を、前記支持部材が前記孔に対して回転することを防止する回り止め形状に形成したことを特徴とする請求項 2、3、4 又は 5 に記載の眼鏡。

【請求項 7】 前記抜け止め部材は前記支持部材の筒内部に全て押し込まれることを特徴とする請求項 2 乃至 6 のいずれか一つに記載の眼鏡。

【請求項 8】 前記抜け止め部材は前記支持部材の筒内部に押し込まれる方向に所定間隔で切れ目を設け、前記抜け止め部材を前記支持部材に押し込んだ後、前記切れ目を用いて必要のない部分を切断することを特徴とする請求項 2 乃至 7 のいずれか一つに記載の眼鏡。

【請求項 9】 前記支持部材が接合された眼鏡部品に、レンズ或いはリムに設けた第 2 の孔に挿入される突起を設けたことを特徴とする請求項 1 乃至 8 のいずれか一つに記載の眼鏡。

【請求項 10】 レンズ或いはリムとブリッジ部及びバットアーム部とを連結する眼鏡において、ブリッジ部及びバットアーム部のどちらか一方に接合されると共に、レンズ或いはリムに設けた孔に挿入される支持部材と、ブリッジ部及びバットアーム部のどちらか他方に接合されると共に、前記支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定させる抜け止め部材と、を備えたことを特徴とする眼鏡。

【請求項 11】 レンズ或いはリムとテンプル部とを連結する眼鏡において、レンズ或いはリムに設けた孔に挿入される支持部材と、該支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定さ

せる抜け止め部材と、を備え、

前記支持部材はテンプル部を回動自在に支持することを特徴とする眼鏡。

【請求項 12】 前記支持部材は前記回動自在に支持されたテンプル部に当接して摺動抵抗を付与する抵抗部材を備えたことを特徴とする請求項 11 に記載の眼鏡。

【請求項 13】 レンズ或いはリムとテンプル部とを連結する眼鏡において、

レンズ或いはリムに設けた孔に挿入される支持部材と、テンプル部に接合されると共に、前記支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定させる抜け止め部材と、を備え、

該抜け止め部材は嵌合時に前記支持部材に対して回動自在に保持されることを特徴とする眼鏡。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、例えばレンズ、リムに眼鏡部品を連結させた眼鏡に関するものである。

【0002】

【従来の技術】 従来、この種の眼鏡としては、例えば図 15 に示すようなものが知られている。

【0003】 図 15 において、眼鏡 100 はレンズ 101 を智 102 と連結させたリムのないタイプであり、レンズ 101 に設けられた孔 110 にボルト 103 を挿入して固定するものである。

【0004】 智 102 は先端に孔 120 が設けてあり、この孔 120 をレンズ 101 の孔 110 に合致させ、ボルト 103 を孔 110 及び孔 120 に挿入し、ワッシャ 104 を介してナット 105 でレンズ 101 と智 102 とを固定している。

【0005】 同様に、レンズ 101 に対し、ブリッジ部及びバットアーム部を連結させる場合にも、ボルト 103 とナット 105 による連結具で連結されていた。

【0006】 一方、図 16 の眼鏡 200 は、図 15 と異なりフロントフレームにリム 201 を有するタイプであるが、図 15 と同様に智 202 がリム 201 にボルト 203 とナット 204 とで連結されている。

【0007】

【発明が解決しようとする課題】 しかしながら、上記のような従来技術の場合には、下記のような問題が生じていた。

【0008】 連結がボルトとナットの締め付けであるので、長期にわたる使用において、テンプル部開閉時に繰り返し発生する締め付け荷重の変動や、振動、衝撃等により、この締め付けはゆるんでしまうことがある。

【0009】 また、眼鏡に使用されるボルトとナットは微小なものであるため、締め付け作業は慎重に行う必要があり、また、ゆるませないための締め付けトルクの管理を要する等、眼鏡の組立性向上を阻害する要因となっ

ていた。

【0010】さらに、レンズ背面であっても、ナットが突出していること、或いはナットの先にボルト先端が突出することはデザイン性から好ましくなかった。

【0011】本発明は上記の従来技術の課題を解決するためになされたもので、その目的とするところは、レンズ或いはリムに対して連結される眼鏡部品の連結状態を長期間安定して維持可能とし、また組立の容易な眼鏡を提供することにある。

【0012】

【課題を解決するための手段】上記目的を達成するために本発明にあっては、レンズ或いはリムと眼鏡部品とを連結する眼鏡において、レンズ或いはリムに設けた孔に挿入されると共に、ブリッジ部、智、バットアーム部、テンプル部の内少なくとも1つの眼鏡部品に接合された支持部材と、該支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定させる抜け止め部材と、を備えたことを特徴とする。

【0013】従って、支持部材と抜け止め部材とを嵌合してレンズ或いはリムに対して容易に眼鏡部品が連結できるので、従来のようなわずらわしいボルトやナットの締め付け作業が必要なくなり、連結が容易で組立作業性が向上してコストダウンが図れると共に、抜け止め部材自身に直接外力がかかることがないので、長期間安定した連結を維持することができる。

【0014】前記支持部材は筒形状に設けられ、前記抜け止め部材は前記支持部材の筒内部に押し込まれることが好ましい。

【0015】これにより、支持部材を拡張させて孔に圧接させて連結を可能にしている。

【0016】前記支持部材はスリットを備えたことが好ましい。

【0017】これにより、支持部材は拡張・縮径の変形が容易に可能となり、孔に対しての支持部材の着脱等が容易にできる。

【0018】前記支持部材は筒内部に段落ちを形成したことが好ましい。

【0019】これにより、抜け止め部材は段の部分まで押し込まれるので、押し込みすぎて抜け止め部材が取り出せなくなることがなく、抜け止め部材の押し込みや、取り出しを容易に可能にしている。

【0020】前記支持部材は板を折り曲げて筒形状に形成されたことが好ましい。

【0021】これにより、スリットを折り曲げ加工時に設けることができ、加工作業効率がよい。

【0022】前記支持部材及び前記孔の断面を、前記支持部材が前記孔に対して回転することを防止する回り止め形状に形成したことが好ましい。

【0023】これにより、レンズ或いはリムに対して眼

鏡部品が連結部分で回転してしまうことを防止することができる。

【0024】前記抜け止め部材は前記支持部材の筒内部に全て押し込まれることが好ましい。

【0025】これにより、抜け止め部材が完全に見えなくなり外観をすっきりとさせ、デザイン性を向上することができる。

【0026】前記抜け止め部材は前記支持部材の筒内部に押し込まれる方向に所定間隔で切れ目を設け、前記抜け止め部材を前記支持部材に押し込んだ後、前記切れ目を用いて必要のない部分を切断することが好ましい。

【0027】これにより、抜け止め部材の必要のない部分に力を加えて押し込みが行えるので、組立作業性を向上する。また、押し込んだ後は切れ目で切断してデザイン性を向上する。さらに、抜け止め部材の押し込み量が異なった場合にも、それに応じた切れ目で切断することができる。

【0028】前記支持部材が接合された眼鏡部品に、レンズ或いはリムに設けた第2の孔に挿入される突起を設けたことが好ましい。

【0029】これにより、眼鏡部品の2点支持ができ、連結部分で回動してしまうことを防止し、支持部材及び抜け止め部材にかかる力を半減させて連結を強固なものとすることができる。

【0030】レンズ或いはリムとブリッジ部及びバットアーム部とを連結する眼鏡において、レンズ或いはリムに設けた孔に挿入されると共に、ブリッジ部及びバットアーム部のどちらか一方に接合された支持部材と、ブリッジ部及びバットアーム部のどちらか他方に接合されると共に、前記支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定させる抜け止め部材と、を備えたことを特徴とする。

【0031】従って、レンズ或いはリムを介してブリッジ部及びバットアーム部を同時に連結することができ、部品点数の減少及び組立作業の効率化が図れる。

【0032】レンズ或いはリムとテンプル部とを連結する眼鏡において、レンズ或いはリムに設けた孔に挿入される支持部材と、該支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定させる抜け止め部材と、を備え、前記支持部材はテンプル部を回動自在に支持することの特徴とする。

【0033】従って、支持部材と抜け止め部材とを嵌合してレンズ或いはリムに対して容易にテンプル部が連結できるので、従来のようなわずらわしいボルトやナットの締め付け作業が必要なくなり、連結が容易で組立作業性が向上してコストダウンが図れると共に、テンプル部が回動自在に支持されるため、眼鏡の構成を単純化させることができる。

【0034】前記支持部材は前記回動自在に支持されたテンブル部に当接して摺動抵抗を付与する抵抗部材を備えたことが好ましい。

【0035】これにより、単純な構成で容易にテンブル部の開閉時の摺動抵抗を得ることができる。

【0036】レンズ或いはリムとテンブル部とを連結する眼鏡において、レンズ或いはリムに設けた孔に挿入される支持部材と、テンブル部に接合されると共に、前記支持部材を前記孔に挿入した状態で、前記支持部材と嵌合して前記支持部材を押し広げて前記孔に圧接固定させる抜け止め部材と、を備え、該抜け止め部材は嵌合時に前記支持部材に対して回動自在に保持されることを特徴とする。

【0037】従って、支持部材と抜け止め部材とを嵌合してレンズ或いはリムに対して容易にテンブル部が連結できるので、従来のようなわずらわしいボルトやナットの締め付け作業が必要なくなり、連結が容易で組立作業性が向上してコストダウンが図れると共に、連結により抜け止め部材自身が回動自在に保持されて丁番の役目を果たし、眼鏡の構成を単純化させることができる。また、支持部材の嵌合による反発力を抜け止め部材が受けて、テンブル部の開閉時の摺動抵抗を得ることができる。

【0038】

【発明の実施の形態】以下に図面を参照して、この発明の好適な実施の形態を例示的に詳しく説明する。ただし、この実施の形態に記載されている構成部品の寸法、材質、形状、その相対配置などは、特に特定の記載がない限りは、この発明の範囲をそれらのみに限定する趣旨のものではない。

【0039】（第1の実施の形態）図1～図6を参照して、第1の実施の形態に係る眼鏡1について説明する。図1は、眼鏡1全体を示す斜視図である。

【0040】眼鏡1は、レンズ2、智3、丁番6を介して智3から延びるテンブル部5、2つのレンズ2をつなぐブリッジ部7、パット8、パット8をレンズ2に対して支持するパットアーム部9、を備える構成である。

【0041】眼鏡1の智3、ブリッジ部7及びパットアーム部9は、それぞれレンズ2に本発明の特徴である連結具4で連結固定されている。

【0042】図2はレンズ2と智3とを固定した部分を拡大して示す拡大図である。

【0043】尚、ここで用いられるレンズ2と智3とを連結固定する方法は、ブリッジ部7又はパットアーム部9をレンズ2に連結固定させる場合に同様に用いられている。

【0044】図2に示すように、智3端部にはろう付けされて接合された支持部材4aが一体的に構成されており、この支持部材4aがレンズ2に設けられた孔20に挿入され、この孔20に支持部材4aが挿入された状態

で支持部材4aに抜け止め部材4bが押し込まれて嵌合し、支持部材4aがレンズ2に対して固定される連結具4である。

【0045】この支持部材4aは、スリット4cを備えた円筒形状であり、通常時の外径がほぼ孔20の径と等しいものであるが、抜け止め部材4bが押し込まれた場合には、その外径は拡張されるものである。

【0046】また、支持部材4aは、挿入方向長さがレンズ2厚よりも短く、孔20に挿入後はレンズ2表面から突出しないものである。

【0047】スリット4cは、支持部材4aの挿入方向先端から延びており、支持部材4aの径を容易に拡張・縮径可能にしており、支持部材4aが孔20に対して着脱することを容易にすると共に、支持部材4aに抜け止め部材4bが押し込まれる際には、支持部材4aを押し広げて拡張させ易くする。

【0048】ここで、本実施の形態では、支持部材4aにスリット4cを1つだけ設けているが、スリット4cを複数設ける構成とすることも好ましい。

【0049】また、スリット4cを設けていない支持部材4aであっても良く、この場合、特に径を変形可能とし且つ十分な剛性を有する金属、樹脂等の材質であると良い。

【0050】抜け止め部材4bは、外周径が支持部材4aの筒内径寸法とほぼ等しいか大径である微小なピンであり、支持部材4a内部に押し込み可能なものである。この抜け止め部材4bは、押し込み易くするため、押し込まれる先端部分の外周径を小径にするよう丸みを付けてある。

【0051】これら支持部材4a及び抜け止め部材4bを備えた連結具4による連結方法について説明する。

【0052】まず、レンズ2の孔20に智3に一体的に設けられた支持部材4aをレンズ2表側から挿入する。この時、支持部材4aが孔20に入りにくくても、スリット4cが支持部材4aの外径を小さく縮径させて挿入することができる。

【0053】次に、図2(b)の断面図に示すように、支持部材4aを孔20に挿入した状態で、支持部材4aの筒内部にレンズ2裏側から抜け止め部材4bを押し込む。

【0054】この時、支持部材4aの筒内径が抜け止め部材4bの外周径とほぼ等しいか小径であることから、抜け止め部材4bが押し込まれることによって、支持部材4a外径は押し広げられてレンズ2の孔20に対して支持部材4a外周面が圧接し、レンズ2に対して支持部材4aが固定される。

【0055】このようにして、支持部材4aに抜け止め部材4bを押し込むことで、レンズ2と智3等の眼鏡部品とを容易に連結することができる。

【0056】本実施の形態では、支持部材4aに押し込

まれた抜け止め部材4 bがいずれの眼鏡部品とも接合していないので、眼鏡1使用時に抜け止め部材4 bに外的な力がかかり抜け出てくることなく、長期間安定して確実に連結できる。

【0057】そして、抜け止め部材8が微小であるので、支持部材4 a及び孔20の形状も小さくでき、支持部材4 aや、抜け止め部材4 b等の連結具4自身が目立たなく、デザイン性も好適である。

【0058】さらに、支持部材4 aに押し込まれた抜け止め部材4 bは支持部材4 a内部に完全に押し込むことができるので、押し込まれたレンズ2裏側からも見えなくなり、眼鏡1のレンズ2裏側からの外観及びデザイン性を向上させることができる。

【0059】支持部材4 aがレンズ2裏面から突出しないことでも、レンズ2裏面がすっきりとした印象になり、眼鏡1の外観及びデザイン性を向上させている。

【0060】次に、この支持部材4 a及び抜け止め部材4 bの連結を取り外す方法を説明する。

【0061】図3に示すように、抜け止め部材4 bを押し込んだ方向の逆側から支持部材4 aにピン等の治具30を押し込んで抜け止め部材4 bを取り外す。すると、支持部材4 aをレンズ2の孔20から容易に抜き取ることができ、レンズ2と智3との連結を取り外すことができる。

【0062】このように、連結具4の連結の取り外しも容易であることから、レンズ2や眼鏡部品等の交換を簡単に行うことができる。

【0063】図4(a)、(b)はその他の本実施の形態で適用できる支持部材4 aの様々な形状を示す例であり、(a)は支持部材4 aの一端部につば部を備えたもので、智3に設けられた貫通する孔に支持部材4 aを挿通してつば部を智3に引っ掛け、レンズ2の孔20に支持部材4 aを挿入するものであり、(b)は支持部材4 aの筒内部が段付きとなっており、抜け止め部材4 bが段の設けられた所定位置までしか押し込まれず、抜け止め部材4 bの着脱が容易にできるものである。

【0064】尚、支持部材4 a及び孔20の挿入断面形状は図4(c)に示すように、多角形c1、不規則な多角形c2或いは楕円形c3の回り止め形状であっても良く、これによって抜け止め部材4 bが押し込まれて支持部材4 aが孔20に圧接した際に、支持部材4 aが回転してしまうことが防げ、支持部材4 aが支持する眼鏡用部材のレンズ2に対する回り止めを行うことができる。

【0065】ここで、図4(c)では支持部材4 aにスリット4 cを図示していないが、スリット4 cを設けた場合であっても良いことはいうまでもない。

【0066】また、回り止めを行う構成として、図5(a)の斜視図に示すように、レンズ2の孔20の挿入断面形状は回り止め形状の四角形であるが、眼鏡部品に接合された支持部材4 aの挿入断面形状は通常の円形の

場合もある。この場合、抜け止め部材4 bが挿入される支持部材4 aの挿入孔4 a1は抜け止め部材4 bと同じ大きさの楕円形の断面形状で形成されている。

【0067】このような構成において、図5(b)に示す断面のように、孔20に支持部材4 aを挿入して抜け止め部材4 bを支持部材4 aに押し込むが、支持部材4 aは微小に拡張される程度であり、支持部材4 aは孔20に対して回転したり、或いは抜け出てしまう。

【0068】そこで次に、孔20に対して支持部材4 aを治具等によって固定した後に、抜け止め部材4 bを90度回転させる。すると、図5(c)に示す断面のように、支持部材4 aは図示横方向に押し広がる変形をして孔20に対して図示横方向に圧接する。

【0069】この抜け止め部材4 bを回転させることは、抜け止め部材4 b後端面の一の字溝4 b1をマイナスドライバで回転させることで容易に可能であり、他にも公知の方法を用いることができる。

【0070】従って、図5に示した構成でも、レンズ2と眼鏡部品とを容易に連結すると共に、レンズ2に対する眼鏡部品の回り止めを行うことができる。

【0071】また、この構成では抜け止め部材4 bを回転させるまでは、眼鏡部品は支持部材4 aを回転させてレンズ2に対しての連結角度を自由に変更可能であるので、レンズ2に連結する眼鏡部品の連結角度を調整して固定することができる。

【0072】一方、図6(a)、(b)、(c)、(d)はその他の本実施の形態に適用できる抜け止め部材4 bの様々な形状を示す例であり、(a)はボール、(b)は座部のないイモネジ、(c)は支持部材4 aへの挿入度合いによって支持部材4 aからはみ出した必要のない部分を容易に切り落とせるように押し込み長さ方向に所定間隔毎に切れ目を設けたピンの断面であり、(d)は押し込まれるに従い拡張するテーパー状のネジの断面であり、支持部材4 a内部の表面を荒らして食い付くものである。

【0073】さらに、図7に示すように、レンズ2裏側から支持部材4 aを挿入し、レンズ2表側から装飾部材10付きピンである抜け止め部材4 bを支持部材4 aに押し込むようにしても良い。

【0074】この時、押し込まれた抜け止め部材4 bは装飾部材10だけが外部に突出するので、眼鏡1のデザイン性を向上させることができる。

【0075】また、特に1点支持では外力によって連結具4で連結された眼鏡部品がレンズ2の固定位置に対して回転等してしまう虞があるので、図2に示すように、連結具4とは個別に眼鏡部品に設けた突起11をレンズ2の第2の孔21に挿入して固定する振れ止め防止手段を設けると良い。

【0076】これによって、眼鏡部品のレンズ2に対する固定が2点支持となって確実になると共に、連結具4

及び振れ止め防止手段で眼鏡部品を支持するので、外力に対して連結具4の負担が軽減できる。

【0077】以上、本実施の形態はレンズ2に対して眼鏡部品が連結された場合について説明したが、従来技術で説明したようなフロントフレームにリムを有する眼鏡において、リムに設けられた孔20を用いてリムに対して眼鏡部品が連結される場合であっても良い。

【0078】(第2の実施の形態)図8には、第2の実施の形態が示されている。上記第1の実施の形態では、支持部材4aは筒形状であったが、本実施の形態では柱

【0079】その他の構成および作用については第1の実施の形態と同一なので、同一の構成部分については同一の符号を付して、その説明は省略する。

【0080】図8(a)に示すように、支持部材4aは、智3先端に設けられて端部から一の字に切れ目を入れている。

【0081】この支持部材4aがレンズ2の孔20に挿入され、板状の抜け止め部材4bが支持部材4の一の字切れ目に押し込まれて嵌合し、支持部材4aを押し広げて孔20に圧接させる。

【0082】このような構成であっても、第1の実施の形態と同様に抜け止め部材4bを支持部材4aの切れ目内部に押し込むことで、支持部材4a外周面を孔20に圧接させて固定することができ、同様な効果を得ることができる。

【0083】尚、図8(b)に示すように、支持部材4aの端部から十字の切れ目を入れることもできる。

【0084】また、図2に示したような振れ止め防止手段を設けることや、図4(c)のように孔20及び支持部材4aの柱の断面形状を多角形に設けて回り止めを行うこともできる。

【0085】(第3の実施の形態)図9には、第3の実施の形態が示されている。上記第1、2の実施の形態では、支持部材4aがレンズ2の孔20に挿入された側と反対側から抜け止め部材4bを押し込んでいたが、本実施の形態では同方向から抜け止め部材4bを押し込むものとなっている。

【0086】その他の構成および作用については第1の実施の形態と同一なので、同一の構成部分については同一の符号を付して、その説明は省略する。

【0087】図9に示すように、支持部材4aがレンズ2裏側から孔20に挿入され、その挿入後の図9(b)の状態で例えばピン等の抜け止め部材4bが同方向のレンズ裏側から支持部材4aに押し込まれ、支持部材4aがレンズ2に固定される。

【0088】また、レンズ2表側から支持部材4aが孔20に挿入され、抜け止め部材4bが支持部材4aに同方向に押し込まれるようにしても良く、この場合は図1

0に示すように、抜け止め部材4bを挿入した後の外観を好適に保つために装飾部材10付きピン等の抜け止め部材4bを使用して、レンズ2表側から支持部材4aをレンズ2の孔20に挿入し、抜け止め部材4bもレンズ2表側から支持部材4内部に押し込むようにしてもよい。

【0089】このように、支持部材4aを孔20に挿入した方向と同方向から抜け止め部材4bを押し込んで嵌合させることも可能である。

【0090】また、レンズ2の厚みが厚く、支持部材4aの挿入方向長さが短い場合等に、レンズ2の厚みに左右されることなく連結させることが可能となる。

【0091】(第4の実施の形態)図11には、第4の実施の形態が示されている。本実施の形態では板状の部材を折り曲げた円筒の支持部材4aの両端から抜け止め部材4bを挿入して嵌合するものとなっている。

【0092】その他の構成および作用については第1の実施の形態と同一なので、同一の構成部分については同一の符号を付して、その説明は省略する。

【0093】本実施の形態の支持部材4aは、板状の部材を円筒に折り曲げており、両端にわたるスリット4cが設けられている。

【0094】そして、第1の実施の形態と同様にレンズ2の孔20に支持部材4aを挿入し、その状態で支持部材4aに抜け止め部材4bを押し込むことで連結固定される。

【0095】ここで、支持部材4aに対し開口した両端から抜け止め部材4bを押し込む。この時、一方のレンズ2表側の抜け止め部材4bは装飾部材10付きのピンである。

【0096】このように、2つの抜け止め部材4bをレンズ2表裏から押し込むことも可能である。

【0097】また、スリット4cは、それぞれの端部から個別に延びるものであっても良い。

【0098】(第5の実施の形態)図12には、第5の実施の形態が示されている。本実施の形態ではブリッジ部7とバットアーム部9とをレンズ2を介して連結させるようになっている。即ち、ブリッジ部7及びバットアーム部9のどちらか一方に支持部材4aを接合し、他方に抜け止め部材4bを接合するものとなっている。

【0099】その他の構成および作用については第1の実施の形態と同一なので、同一の構成部分については同一の符号を付して、その説明は省略する。

【0100】本実施の形態の支持部材4aは、第1の実施の形態と同様の筒形状であり、バットアーム部9に2つ設けられている。

【0101】また、抜け止め部材4bは、ブリッジ部7に2つ設けられており、先端にボール状の突起を有するピンである。

【0102】そして、レンズ2の2つの孔20にバット

アーム部9の支持部材4aを挿入して嵌合させ、その状態で支持部材4aに抜け止め部材4bを押し込むことで連結固定される。

【0103】これにより、ブリッジ部7とバットアーム部9とをレンズ2を介して連結でき、レンズ2に対しての連結機構を減少し、デザイン性を向上することができると共に、眼鏡1の組み立て作業性を向上することができる。

【0104】尚、ブリッジ部7とバットアーム部9に対する連結具4の接合の組み合わせは、例えばブリッジ部7とバットアーム部9に支持部材4a及び抜け止め部材4bをそれぞれ接合する等の組み合わせに変更できる。

【0105】(第6の実施の形態) 図13には、第6の実施の形態が示されている。図13(a)は連結前の図、図13(b)は連結後の図、図13(c)は(b)のA-A断面図である。

【0106】図13において、眼鏡1のレンズ2とテンブル部5とを連結具4で連結している。ここで、眼鏡1は、第1の実施の形態と同様な構成であるのでその説明は省略する。

【0107】本実施の形態のレンズ2とテンブル部5とを連結する連結具4は、支持部材4a、抵抗部材としてのシリコーン12、抜け止め部材4bとから構成されている。

【0108】支持部材4aは、筒状で、直径方向に貫通する貫通孔13を有し、レンズ2の孔20にレンズ2裏側から挿入される。この支持部材4aは挿入方向先端から貫通孔13まで延びるスリット4cを備えている。

【0109】貫通孔13には、テンブル部5が直接挿通され、挿通支持された部分を回動可能に保持し、テンブル部5を開閉自在とする丁番の役目を果たすようになっている。

【0110】テンブル部5は断面円形の棒状の部材で形成されており、支持部材4aの貫通孔13に挿通支持される場合に、テンブル部5が開きすぎることを防止するため、所定の開度にテンブル部5が開くとレンズ2裏面に当接するストッパー5sをテンブル部5の貫通孔13に挿通した先端を折り曲げて設けている。

【0111】また、シリコーン12は、円柱形状であり、支持部材4a内部に押し込まれて貫通孔13に挿通支持されたテンブル部5(回動軸)に当接する。

【0112】抜け止め部材4bは、支持部材4a内径よりも後端外径が大きくなっている弾丸形状であり、シリコーン12を押し込んだ支持部材4a内部に押し込まれて嵌合して支持部材4aを押し広げ、支持部材4aを孔20に圧接させる。

【0113】以上説明した構成による連結具4によって、レンズ2とテンブル部5とを連結する方法を説明すると、まず、支持部材4aの貫通孔13にテンブル部5を挿通し、テンブル部5を支持部材4aに挿通支持させ

る。

【0114】次に、支持部材4a内部にシリコーン12を押し込み、その支持部材4aを孔20に挿入する。この時、支持部材4aはテンブル部5がレンズ2裏面に当接してレンズ2裏面を傷つけない程度まで挿入される。

【0115】そして、孔20に支持部材4aが挿入された状態で、抜け止め部材4bがレンズ2表側から支持部材4aに押し込まれて嵌合させる。

【0116】この抜け止め部材4bの押し込みによって、支持部材4aの径が押し広げられて拡張され、孔20に支持部材4aが圧接してレンズ2に固定される。

【0117】以上のように本実施の形態では、レンズ2とテンブル部5とを容易に連結させることができると共に、連結によってテンブル部5を開閉自在にさせる丁番の役目を持たせることができる。

【0118】また、抜け止め部材4bを支持部材4aに押し込む前に、シリコーン12を押し込んでおり、テンブル部5の貫通孔13に挿通された回動部分(回動軸)にシリコーン12を当接させてテンブル部5の開閉時の摺動抵抗(あがき)を生み出している。

【0119】シリコーン12の押し込み方向長さを変更して、抜け止め部材4bの押し込みによるテンブル部5の回動軸への当接力を変更して、摺動抵抗の調整を行うことができる。

【0120】さらに、ストッパー5sの折り曲げ方向を変更することで、テンブル部5の開度を調整することができる。

【0121】尚、テンブル部5は支持部材4aの貫通孔13に挿通支持されて開閉自在であればよく、挿通支持される部分(回動軸)が良好に回動可能な例えば、扇形や楕円断面形状で設けることもできる。

【0122】(第7の実施の形態) 図14には、第7の実施の形態が示されている。図14(a)は連結前の図、図14(b)は連結後の図である。

【0123】図14において、第6の実施の形態と同様に眼鏡1のレンズ2とテンブル部6とを連結具4で連結している。

【0124】本実施の形態のレンズ2とテンブル部5とを連結する連結具4は、支持部材4a、抜け止め部材4bとからなる。

【0125】支持部材4aは挿入方向の後端が孔20の幅よりも大きな平板状で、レンズ2の孔20に所定位置まで挿入されるとそれ以上は挿入されないようになっている。

【0126】この支持部材4aには、孔20に挿入されてレンズ2裏側に抜き出る挿入方向先端に溝14を設けている。

【0127】この溝14は抜け止め部材4bをくわえ込むことができ、溝14に抜け止め部材4bをくわえ込んだ支持部材4aの幅は孔20の幅よりも大きくなるよう

になっている。

【0128】また、抜け止め部材4bは、折り曲げられた棒状の部材であるテンブル部5先端である。

【0129】この連結具4によってレンズ2とテンブル部5とを連結させる方法を説明すると、まず、レンズ2の孔20にレンズ2表側から支持部材4aを挿入する。

【0130】それ以上挿入されない所定位置まで支持部材4aが挿入された後、レンズ2裏面に抜き出た挿入方向先端の支持部材4aの溝14にテンブル部5先端の抜け止め部4bをくわえ込ませて嵌合させる。

【0131】これにより、抜け止め部材4bを溝14にくわえ込んだ支持部材4aは、レンズ2裏面に抜き出た部分が押し広げられて孔20の幅よりも大きくなり、支持部材4aが孔20を圧接してレンズ2に対して固定される。

【0132】この時、溝14にくわえ込まれた状態で、抜け止め部材4bは回動可能となっており、従って抜け止め部材4bを有するテンブル部5が開閉自在に支持される。

【0133】このように、本実施の形態では、レンズ2とテンブル部5とを容易に連結することができると共に、連結によって抜け止め部材4bに、テンブル部5を開閉自在にさせる丁番の役目を持たせることができる。

【0134】また、抜け止め部材4bを支持部材4aの溝14にくわえ込ませた状態は、溝14両側で変形した支持部材4aの反発力を抜け止め部材4bが受けており、抜け止め部材4bが挟み付けられて摺動抵抗が付与されている。即ち、テンブル部5の開閉時の摺動抵抗（あがき）を生み出すようになっている。

【0135】さらに、上記に示すようにレンズ2とテンブル部5とを連結させているので、テンブル部5を折り畳んだ際に、余計な厚みとなる眼鏡部品がないため、レンズ2面から丁番の役目を果たす連結具4までの長さが短く、薄く折り畳むことができる。

【0136】尚、抜け止め部材4bが図示上下方向にスライドしてしまう場合には、溝14から抜け止め部材4bが抜け出してしまうため、抜け止め部材4b先端を折り曲げて抜け出ることを防止するとよい。この時、第6の実施の形態と同様にストッパー5sをテンブル部5先端に設けて、テンブル部5の開度を決めても良い。

【0137】他にもキャップを例えば接着、溶接或いはねじ込み等により取付けたり、抜け止め部材4b先端の断面形状を多角形に設けたり、抜け止め部材4bの支持部材4aによって挟み付けられる部分だけを小径な段差に設けて抜け出してしまうことを防止しても良い。

【0138】

【発明の効果】本発明は、ブリッジ部、智、バットアーム部、テンブル部の内少なくとも1つの眼鏡部品に接合された支持部材を備えたことで、支持部材と抜け止め部材とを嵌合してレンズ或いはリムに対して容易に眼鏡部

品が連結できるので、従来のようなわずらわしいボルトやナットの締め付け作業が必要なくなり、連結が容易で組立作業性が向上してコストダウンが図れると共に、抜け止め部材自身に直接外力がかかることがないので、長期間安定した連結を維持することができる。

【0139】支持部材は筒形状に設けられ、抜け止め部材は支持部材の筒内部に押し込まれることで、支持部材を拡張させて孔に圧接させて連結を可能にしている。

【0140】支持部材はスリットを備えたことで、支持部材は拡張・縮径の変形が容易に可能となり、孔に対しての支持部材の着脱等が容易にできる。

【0141】支持部材は筒内部に段落ちを形成したことで、抜け止め部材は段の部分まで押し込まれるので、押し込みすぎて抜け止め部材が取り出せなくなることがなく、容易に抜け止め部材の押し込み、取り出しを可能にしている。

【0142】支持部材は板を折り曲げて筒形状に形成されたことで、スリットを折り曲げ加工時に設けることができ、加工作業効率がよい。

【0143】支持部材及び孔の断面を、支持部材が孔に対して回転することを防止する回り止め形状に形成したことで、レンズ或いはリムに対して眼鏡部品が連結部分で回転してしまうことを防止することができる。

【0144】抜け止め部材は支持部材の筒内部に全て押し込まれることで、抜け止め部材が完全に見えなくなり外観をすっきりとさせ、デザイン性を向上することができる。

【0145】抜け止め部材は支持部材の筒内部に押し込まれる方向に所定間隔で切れ目を設け、抜け止め部材を支持部材に押し込んだ後、切れ目を用いて必要のない部分を切断することで、抜け止め部材の必要のない部分に力を加えて押し込みが行えるので、組立作業性を向上する。また、押し込んだ後は切れ目で切断してデザイン性を向上する。さらに、抜け止め部材の押し込み量が異なった場合にも、それに応じた切れ目で切断することができる。

【0146】支持部材が接合された眼鏡部品に、レンズ或いはリムに設けた第2の孔に挿入される突起を設けたことで、眼鏡部品の2点支持ができ、連結部分で回動してしまうことを防止し、支持部材及び抜け止め部材にかかる力を半減させて連結を強固なものとすることができる。

【0147】ブリッジ部及びバットアーム部のどちらか一方に接合された支持部材と、ブリッジ部及びバットアーム部のどちらか他方に接合された抜け止め部材と、を備えたことで、レンズ或いはリムを介してブリッジ部及びバットアーム部を同時に連結することができ、部品点数の減少及び組立作業の効率化が図れる。

【0148】支持部材はテンブル部を回動自在に支持することで、支持部材と抜け止め部材とを嵌合してレンズ

或いはリムに対して容易に眼鏡部品が連結できるので、従来のようなわずらわしいボルトやナットの締め付け作業が必要なくなり、連結が容易で組立作業性が向上してコストダウンが図れると共に、テンプル部が回動自在に支持されるため、眼鏡の構成を単純化させることができる。

【0149】支持部材は回動自在に支持されたテンプル部に当接して摺動抵抗を付与する抵抗部材を備えたことで、単純な構成で容易にテンプル部の開閉時の摺動抵抗を得ることができる。

【0150】抜け止め部材は嵌合時に支持部材に対して回動自在に保持されることで、支持部材と抜け止め部材とを嵌合してレンズ或いはリムに対して容易にテンプル部が連結できるので、従来のようなわずらわしいボルトやナットの締め付け作業が必要なくなり、連結が容易で組立作業性が向上してコストダウンが図れると共に、連結により抜け止め部材自身が回動自在に保持されて丁番の役目を果たし、眼鏡の構成を単純化させることができる。また、支持部材の嵌合による反発力を抜け止め部材が受けて、テンプル部の開閉時の摺動抵抗を得ることができる。

【図面の簡単な説明】

【図1】第1の実施の形態に係る眼鏡を示す斜視図である。

【図2】第1の実施の形態に係る眼鏡に適用される連結具周辺を示す図である。

【図3】第1の実施の形態に係る眼鏡の連結具を取り外す方法を示す図である。

【図4】第1の実施の形態に係る支持部材の他の例を示す図である。

【図5】第1の実施の形態に係る眼鏡に適用される連結具の他の例を示す図である。

【図6】第1の実施の形態に係る抜き止め部材の他の例を示す図である。

【図7】第1の実施の形態に係る他の例の眼鏡に適用される連結具周辺を示す図である。

【図8】第2の実施の形態に係る眼鏡に適用される連結\*

\* 具周辺を示す図である。

【図9】第3の実施の形態に係る眼鏡に適用される連結具周辺を示す図である。

【図10】第3の実施の形態に係る他の例の眼鏡に適用される連結具周辺を示す図である。

【図11】第4の実施の形態に係る眼鏡に適用される連結具周辺を示す図である。

【図12】第5の実施の形態に係る眼鏡に適用される連結具周辺を示す図である。

10 【図13】第6の実施の形態に係る眼鏡に適用される連結具周辺を示す図である。

【図14】第7の実施の形態に係る眼鏡に適用される連結具周辺を示す図である。

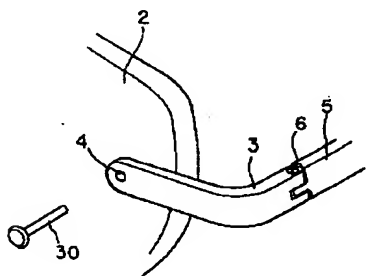
【図15】従来技術に係る眼鏡を示す図である。

【図16】従来技術に係る眼鏡を示す図である。

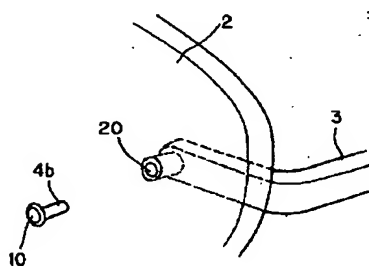
【符号の説明】

- |     |          |
|-----|----------|
| 1   | 眼鏡       |
| 2   | レンズ      |
| 3   | 智        |
| 4   | 連結具      |
| 4 a | 支持部材     |
| 4 b | 抜け止め部材   |
| 4 c | スリット     |
| 5   | テンプル部    |
| 5 s | ストッパー    |
| 6   | 丁番       |
| 7   | ブリッジ部    |
| 8   | バット部     |
| 9   | バットアーム部  |
| 30  | 10 装飾部材  |
|     | 11 突起    |
|     | 12 シリコーン |
|     | 13 貫通孔   |
|     | 14 溝     |
|     | 20 孔     |
|     | 21 第2の孔  |
|     | 30 治具    |

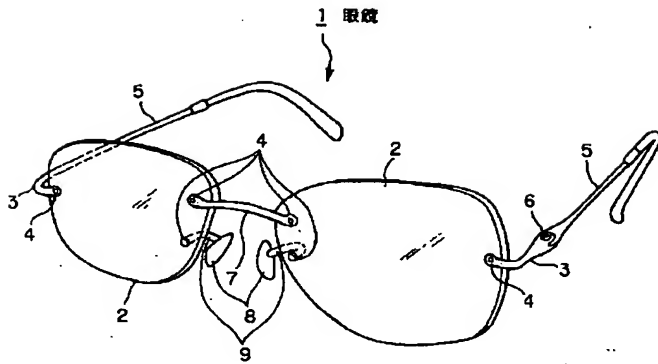
【図3】



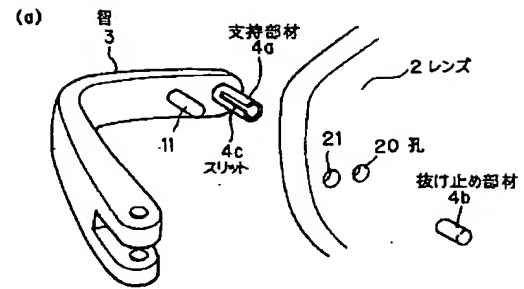
【図7】



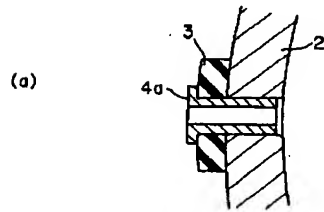
【図1】



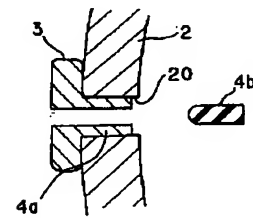
【図2】



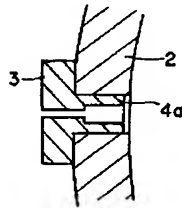
【図4】



(b)



(b)



【図6】

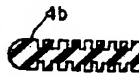
(a)



(b)



(c)

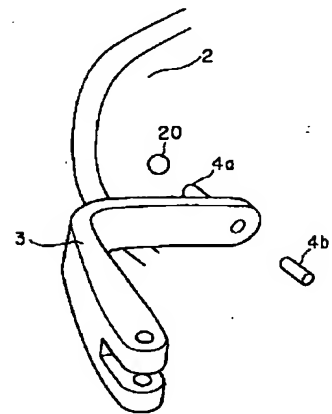


(d)

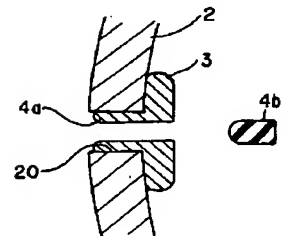


【図9】

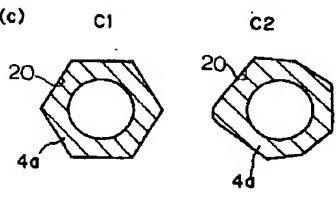
(a)



(b)



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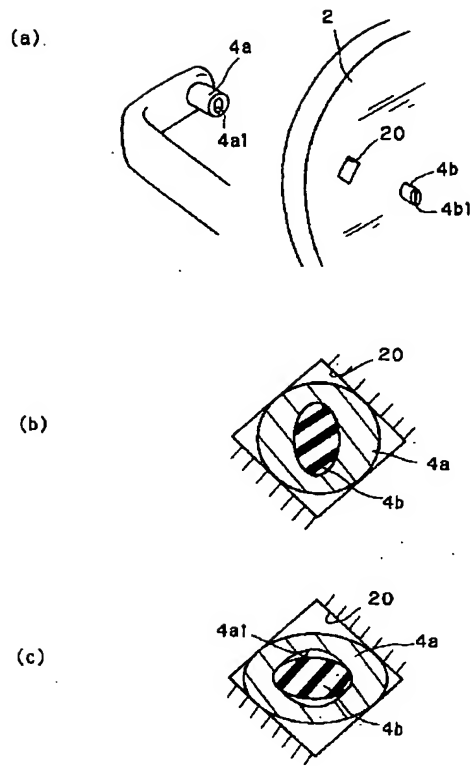
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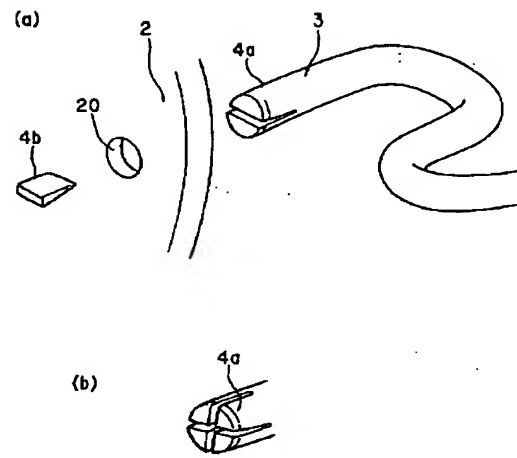
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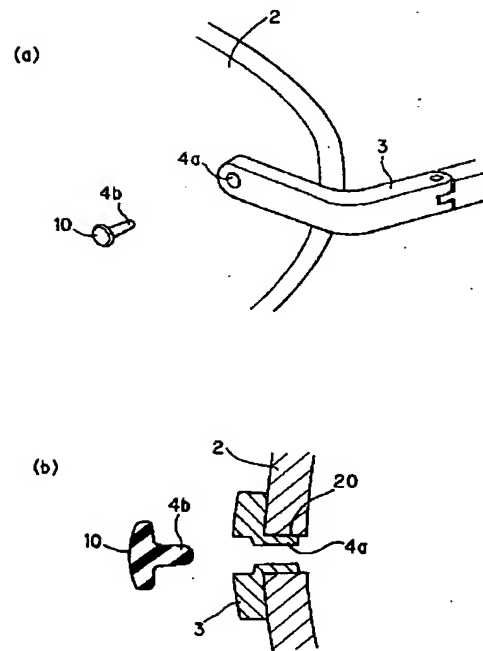
【図5】



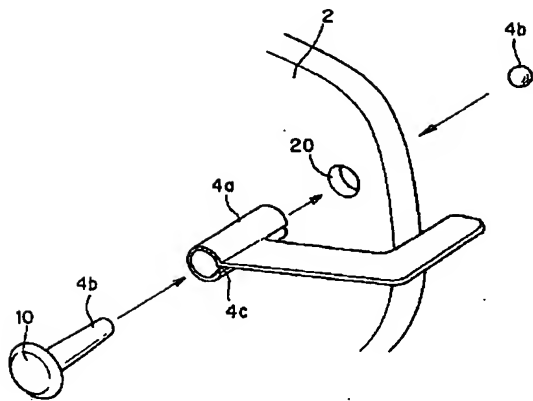
【図8】



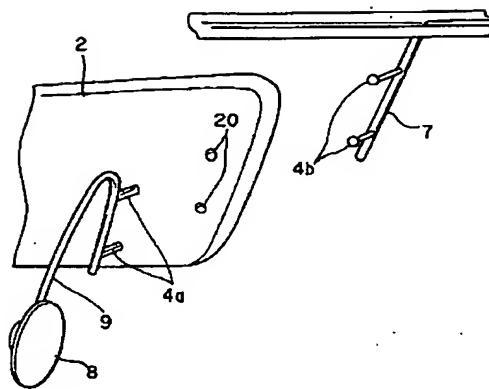
【図10】



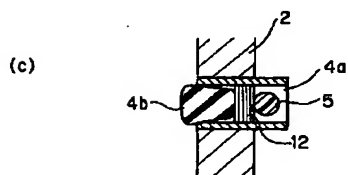
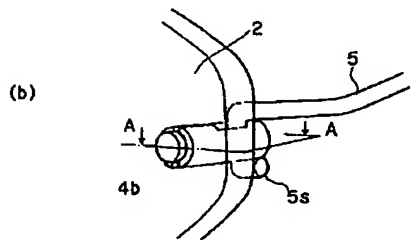
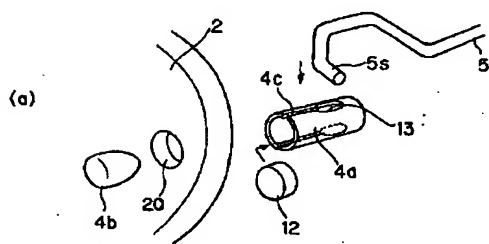
【図11】



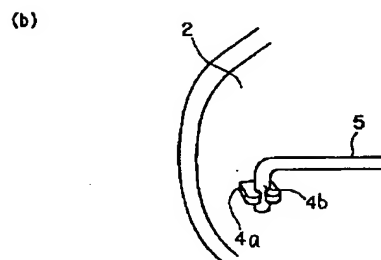
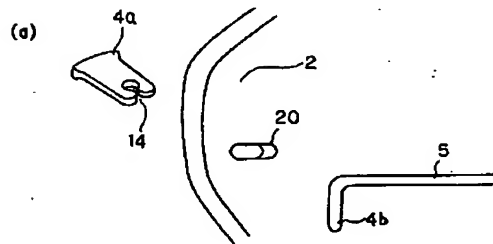
【図12】



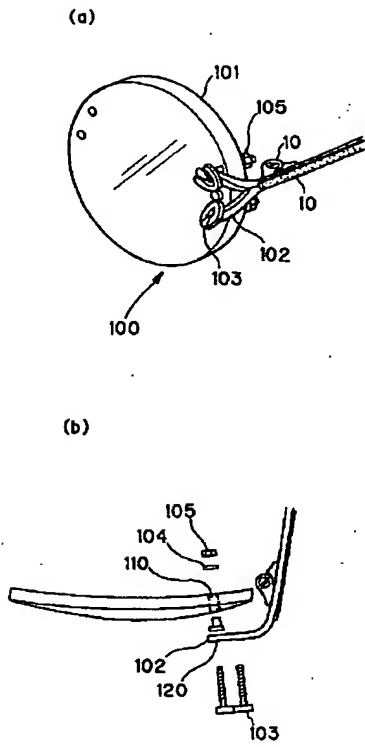
【図13】



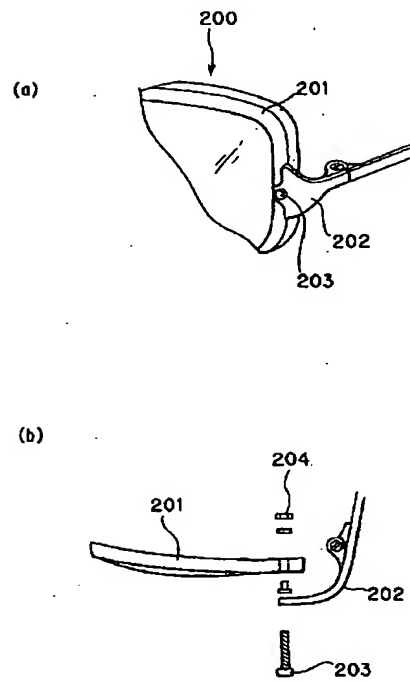
【図14】



【図15】



【図16】



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- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

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CLAIMS

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[Claim(s)]

[Claim 1] While being inserted in the hole prepared in the lens or the rim in the glasses which connect a lens, or a rim and glasses components The supporter material joined to at least one glasses component among the bridge section, \*\*, the putt arm section, and the Temple section, and this supporter material in the condition of having inserted in said hole The glasses characterized by the thing which it fits in with said supporter material, and you extend said supporter material, and is made for said hole to carry out pressure-welding immobilization, and which fell out and was equipped with the stop member.

[Claim 2] Said supporter material is glasses according to claim 1 which are formed in the shape of a cartridge and characterized by said thing [ that escape and a stop member is stuffed into the interior of the cylinder of said supporter material ].

[Claim 3] Said supporter material is glasses according to claim 2 characterized by having a slit.

[Claim 4] Said supporter material is glasses according to claim 2 or 3 characterized by forming gradation in the interior of a cylinder.

[Claim 5] Said supporter material is glasses according to claim 2, 3, or 4 characterized by having bent the plate and being formed in the shape of a cartridge.

[Claim 6] The glasses according to claim 2, 3, 4, or 5 characterized by forming in the baffle configuration which prevents that said supporter material rotates the cross section of said supporter material and said hole to said hole.

[Claim 7] They are claim 2 characterized by said thing [ that escape and a stop member is altogether stuffed into the interior of the cylinder of said supporter material ] thru/or the glasses of any one publication of six.

[Claim 8] They are claim 2 which it escapes and a stop member prepares a break in said direction stuffed into the interior of the cylinder of said supporter material at intervals of predetermined, and is characterized by cutting the part which does not have the need using said break after [ said ] escaping and stuffing a stop member into said supporter material thru/or the glasses of any one publication of seven.

[Claim 9] Claim 1 characterized by preparing the projection inserted in the 2nd hole prepared in the lens or the rim at the glasses components to which said supporter material was joined thru/or the glasses of any one publication of eight.

[Claim 10] In the glasses which connect a lens or a rim, the bridge section, and the putt arm section, while being joined to either the bridge section or the putt arm section While being joined by which of the supporter material inserted in the hole prepared in the lens or the rim, and the bridge section and the putt arm section, or another side The glasses characterized by the thing which it fits in with said supporter material, and you extend said supporter material, and is made for said hole to carry out pressure-welding immobilization where said supporter material is inserted in said hole, and which fell out and was equipped with the stop member.

[Claim 11] They are the glasses which fall out, are equipped with a stop member and characterized by the thing which it fits in with said supporter material, and you extend said supporter material, and is made for said hole to carry out pressure-welding immobilization where the supporter material inserted in the hole prepared in the lens or the rim in the glasses which connect a lens or a rim, and the Temple section, and this supporter material are inserted in said hole, and to which said supporter material supports the Temple section free [ rotation ].

[Claim 12] Said supporter material is glasses according to claim 11 characterized by having the resistance member which gives a sliding friction in contact with the Temple section supported free [ said rotation ].

[Claim 13] While being joined to the supporter material inserted in the hole prepared in the lens or the rim in

the glasses which connect a lens or a rim; and the Temple section by the Temple section They are the glasses which fall out, are equipped with a stop member and characterized by the thing which fit in with said supporter material, extends said supporter material, and said hole is made to carry out pressure-welding immobilization where said supporter material is inserted in said hole, and for which this omission stop member is held free [ rotation ] to said supporter material at the time of fitting.

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[Translation done.]

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to a lens and the glasses which made glasses components connect with a rim.

[0002]

[Description of the Prior Art] Conventionally, as this kind of glasses, the thing as shown, for example in drawing 1515 is known.

[0003] In drawing 15, glasses 100 are types without the rim which made the lens 101 connect with \*\* 102, insert a bolt 103 in the hole 110 prepared in the lens 101, and fix to it.

[0004] Have formed the hole 120 at the tip, and \*\* 102 makes this hole 120 agree in the hole 110 of a lens 101, inserts a bolt 103 in a hole 110 and a hole 120, and is fixing a lens 101 and \*\* 102 with the nut 105 through a washer 104.

[0005] Similarly, when making the bridge section and the putt arm section connect to a lens 101, it was connected with the connection implement with a bolt 103 and a nut 105.

[0006] On the other hand, although the glasses 200 of drawing 16 are types which have a rim 201 on a front frame unlike drawing 15, \*\* 202 is connected with the rim 201 with the bolt 203 and the nut 204 like drawing 15.

[0007]

[Problem(s) to be Solved by the Invention] However, in the case of the above conventional techniques, the following problems had arisen.

[0008] Since connection is bolting of a bolt and a nut, in the use over a long period of time, this bolting may loosen by fluctuation of the bolting load repeatedly generated at the time of the Temple section closing motion, vibration, an impact, etc.

[0009] Moreover, since the bolt and nut which are used for glasses were minute, requiring management of the bolting torque for doing a bolting activity carefully and not making it loosen etc. had become the factor which checks the assembly disposition top of glasses.

[0010] Furthermore, even if it was a lens tooth back, it was not desirable from design nature that the nut has projected or that a bolt tip projected at the point of a nut.

[0011] The place which it was made in order that this invention might solve the technical problem of the above-mentioned conventional technique, and is made into the purpose is to be stabilized for a long period of time, and enable maintenance of the connection condition of the glasses components connected to a lens or a rim, and offer the easy glasses of assembly.

[0012]

[Means for Solving the Problem] If it is in this invention in order to attain the above-mentioned purpose While being inserted in the hole prepared in the lens or the rim in the glasses which connect a lens, or a rim and glasses components It is characterized by the thing which it fits in with said supporter material, and you extend said supporter material, and is made for said hole to carry out pressure-welding immobilization where the supporter material joined to at least one glasses component among the bridge section, \*\*, the putt arm section, and the Temple section and this supporter material are inserted in said hole and which fell out and was equipped with the stop member.

[0013] Therefore, since it escapes and direct external force is not applied to the stop member itself while the

bolting activity of a troublesome bolt like before or a nut becomes unnecessary, and connection is easy, and improving assembly-operation nature and being able to aim at a cost cut, since it escapes with supporter material, and it fits in and glasses components can connect a stop member easily to a lens or a rim, the connection stabilized for a long period of time is maintainable.

[0014] Said supporter material is prepared in the shape of a cartridge, it escapes and said thing [ being pushed into the interior of the cylinder of said supporter material ] is [ a stop member ] desirable.

[0015] By this, the diameter of supporter material is made to expand, a pressure welding is carried out to a hole, and connection is made possible.

[0016] As for said supporter material, it is desirable to have had the slit.

[0017] Thereby, deformation of diameter expansion and diameter reduction becomes possible easily, and supporter material can perform easily attachment and detachment of the supporter material to a hole etc.

[0018] As for said supporter material, it is desirable to have formed gradation in the interior of a cylinder.

[0019] Since it escapes and a stop member is pushed in to the part of a stage by this, it pushes in too much and escapes, and it becomes impossible to take out a stop member, and escapes, and pushing of a stop member and ejection are easily made possible.

[0020] As for said supporter material, it is desirable to have bent the plate and to have been formed in the shape of a cartridge.

[0021] By this, a slit can be bent, it can prepare at the time of processing, and processing working efficiency is good.

[0022] It is desirable to have formed in the baffle configuration which prevents that said supporter material rotates the cross section of said supporter material and said hole to said hole.

[0023] Thereby, it can prevent that glasses components rotate by the joining segment to a lens or a rim.

[0024] It escapes and said thing [ that all are stuffed into the interior of the cylinder of said supporter material ] of a stop member is desirable.

[0025] By this, it can escape, a stop member can disappear completely, an appearance can be felt refreshed, and design nature can be improved.

[0026] It escapes and a break is prepared in said direction in which a stop member is stuffed into the interior of the cylinder of said supporter material at intervals of predetermined, and after [ said ] escaping and stuffing a stop member into said supporter material, it is desirable to cut the part which does not have the need using said break.

[0027] Since it can push into the part which falls out and does not have the need for a stop member by this by applying the force, assembly-operation nature is improved. Moreover, after pushing in, it cuts by the break and design nature is improved. Furthermore, also when it escapes and the amounts of pushing of a stop member differ, it can cut by the break according to it.

[0028] It is desirable to have prepared the projection inserted in the 2nd hole prepared in the glasses components to which said supporter material was joined at the lens or the rim.

[0029] By this, two-point support of glasses components can be performed, it prevents rotating by the joining segment, supporter material and the force which falls out and is applied to a stop member are reduced by half, and connection can be made firm.

[0030] While being inserted in the hole prepared in the lens or the rim in the glasses which connect a lens or a rim, the bridge section, and the putt arm section While being joined by which of the supporter material joined to either the bridge section or the putt arm section, and the bridge section and the putt arm section, or another side It is characterized by the thing which it fits in with said supporter material, and you extend said supporter material, and is made for said hole to carry out pressure-welding immobilization where said supporter material is inserted in said hole and which fell out and was equipped with the stop member.

[0031] Therefore, the bridge section and the putt arm section can be connected with coincidence through a lens or a rim, and reduction of components mark and the increase in efficiency of assembly operation can be attained.

[0032] In the glasses which connect a lens or a rim, and the Temple section, it escapes, and has a stop member and said supporter material is characterized by the thing which it fits in with said supporter material, and you extend said supporter material, and is made for said hole to carry out pressure-welding immobilization where the supporter material inserted in the hole prepared in the lens or the rim and this supporter material are inserted

in said hole and which support the Temple section free [ rotation ].

[0033] Therefore, since the Temple section is supported free [ rotation ] while the bolting activity of a troublesome bolt like before or a nut becomes unnecessary, and connection is easy, and improving assembly-operation nature and being able to aim at a cost cut, since it escapes with supporter material, and it fits in and the Temple section can connect a stop member easily to a lens or a rim, the configuration of glasses can be simplified.

[0034] As for said supporter material, it is desirable to have had the resistance member which gives a sliding friction in contact with the Temple section supported free [ said rotation ].

[0035] Thereby, the sliding friction at the time of closing motion of the Temple section can be easily obtained with a simple configuration.

[0036] While being joined to the supporter material inserted in the hole prepared in the lens or the rim in the glasses which connect a lens or a rim, and the Temple section by the Temple section It escapes, has a stop member and is characterized by the thing which fit in with said supporter material, extends said supporter material, and said hole is made to carry out pressure-welding immobilization where said supporter material is inserted in said hole and for which this omission stop member is held free [ rotation ] to said supporter material at the time of fitting.

[0037] Therefore, since it escapes with supporter material, and it fits in and the Temple section can connect a stop member easily to a lens or a rim, while the bolting activity of a troublesome bolt like before or a nut becomes unnecessary, and connection is easy, and improving assembly-operation nature and being able to aim at a cost cut, it escapes by connection, the stop member itself can be held free [ rotation ], the duty of a hinge can be achieved, and the configuration of glasses can be simplified. Moreover, it can escape from the repulsive force by fitting of supporter material, a stop member can receive, and the sliding friction at the time of closing motion of the Temple section can be obtained.

[0038]

[Embodiment of the Invention] With reference to a drawing, the gestalt of suitable implementation of this invention is explained in detail in instantiation below. However, the dimension of the component part indicated by the gestalt of this operation, the quality of the material, a configuration, its relative configuration, etc. are not the things of those meanings limited to seeing about the range of this invention, as long as there is no specific publication especially.

[0039] (Gestalt of the 1st operation) With reference to drawing 1 - drawing 6 , the glasses 1 concerning the gestalt of the 1st operation are explained. Drawing 1 is the perspective view showing the glasses 1 whole.

[0040] Glasses 1 are configurations equipped with the putt arm section 9 which supports a lens 2, \*\* 3, the bridge section 7 that connects the lens 2 of the 5 or 2 Temple sections prolonged from \*\* 3 through a hinge 6, putt 8, and putt 8 to a lens 2.

[0041] Connection immobilization of \*\* 3, the bridge section 7, and the putt arm section 9 of glasses 1 is carried out at the lens 2 with the connection implement 4 which is the description of this invention, respectively.

[0042] Drawing 2 is the enlarged drawing expanding and showing the part which fixed a lens 2 and \*\* 3.

[0043] In addition, the approach of carrying out connection immobilization of the lens 2 used here and \*\* 3 is similarly used, when making a lens 2 carry out connection immobilization of the bridge section 7 or the putt arm section 9.

[0044] As shown in drawing 2 , supporter material 4a which was soldered and was joined to \*\* 3 edge is constituted in one. It is the connection implement 4 with which it escapes to supporter material 4a where this supporter material 4a was inserted in the hole 20 prepared in the lens 2 and supporter material 4a is inserted in this hole 20, and stop member 4b is pushed in, it fits in, and supporter material 4a is fixed to a lens 2.

[0045] Although this supporter material 4a has the shape of a cylindrical shape equipped with slit 4c and the outer diameter at the time is usually the path and equal of a hole 20 mostly, when it escapes and stop member 4b is pushed in, the diameter of that outer diameter is expanded.

[0046] Moreover, supporter material 4a has path-of-insertion die length shorter than lens 2 thickness, and after inserting in a hole 20, it does not project from lens 2 front face.

[0047] Slit 4c is carried out that extend supporter material 4a and it is easy to make the diameter expand, in case it escapes to supporter material 4a and stop member 4b is pushed in, while having extended from the path-of-

insertion tip of supporter material 4a, enabling diameter expansion and diameter reduction of the path of supporter material 4a easily and making it easy that supporter material 4a detaches and attaches to a hole 20. [0048] Although only one slit 4c is prepared in supporter material 4a with the gestalt of this operation here, it is also desirable to consider as the configuration which prepares two or more slit 4c.

[0049] Moreover, you may be supporter material 4a which has not prepared slit 4c, and it is good in it being the quality of the material of a metal, resin, etc. which makes especially a path deformable in this case, and has sufficient rigidity.

[0050] It escapes, and the diameter of a periphery is almost equal to the cylinder inside diameter of supporter material 4a, or it is [ it is the minute pin which is a major diameter, and / stop member 4b is stuffed into the interior of supporter material 4a, and ] possible. It escapes, and in order [ this ] to make it easy to push in, stop member 4b has attached the radius of circle so that the diameter of a periphery for the point pushed in may be made into a minor diameter.

[0051] The connection approach by these supporter material 4a and the connection implement 4 which fell out and was equipped with stop member 4b is explained.

[0052] First, supporter material 4a prepared in \*\* 3 in one is inserted in the hole 20 of a lens 2 from lens 2 side front. Even if supporter material 4a cannot go into a hole 20 easily at this time, slit 4c can make the diameter of the outer diameter of supporter material 4a able to reduce small, and can insert it.

[0053] Next, as shown in the sectional view of drawing 2 (b), where supporter material 4a is inserted in a hole 20, it escapes from lens 2 background and stop member 4b is stuffed into the interior of the cylinder of supporter material 4a.

[0054] At this time, the cylinder bore of supporter material 4a falls out, and it is almost equal to the diameter of a periphery of stop member 4b, or by escaping and pushing in stop member 4b from it being a minor diameter, a supporter material 4a outer diameter can be extended, a supporter material 4a peripheral face carries out a pressure welding to the hole 20 of a lens 2, and supporter material 4a is fixed to a lens 2.

[0055] Thus, a lens 2 and the glasses components of \*\* 3 grade can be easily connected by escaping to supporter material 4a and pushing in stop member 4b.

[0056] With the gestalt of this operation, since it escapes and stop member 4b has joined to neither of the glasses components, it escapes at the time of glasses 1 use, there is nothing that was stuffed into supporter material 4a and to which the external force should keep being applied and comes out to stop member 4b, and it is stabilized for a long period of time, and can connect certainly.

[0057] And it escapes, and since the stop member 8 is minute, the configuration of supporter material 4a and a hole 20 can also be made small, connection implement 4 selves, such as supporter material 4a and omission stop member 4b, are not conspicuous, and design nature is also suitable.

[0058] Furthermore, it can disappear also from lens 2 background which was stuffed into supporter material 4a and which was pushed in since it could escape and stop member 4b was completely stuffed into the interior of supporter material 4a, and the appearance and design nature from lens 2 background of glasses 1 can be raised.

[0059] Lens 2 rear face becomes the impression felt refreshed, and that supporter material 4a does not project from lens 2 rear face is also raising the appearance and design nature of glasses 1.

[0060] Next, this supporter material 4a and approach of falling out and removing connection of stop member 4b are explained.

[0061] As shown in drawing 3, it pushes in and escapes from the fixtures 30, such as a pin, to supporter material 4a from the reverse side of the direction which fell out and pushed in stop member 4b, and stop member 4b is removed. Then, supporter material 4a can be easily sampled from the hole 20 of a lens 2, and connection to a lens 2 and \*\* 3 can be removed.

[0062] Thus, since removal of connection of the connection implement 4 is also easy, a lens 2, glasses components, etc. are easily exchangeable.

[0063] Drawing 4 (a) and (b) are examples which show various configurations of supporter material 4a applicable with the gestalt of these other operations, and (a) is what equipped the end section of supporter material 4a with the flange section. Supporter material 4a is inserted in the hole which was prepared in \*\* 3 and to penetrate. The flange section to \*\* 3 A jig, Supporter material 4a is inserted in the hole 20 of a lens 2, and stop member 4b is pushed in only to the predetermined location in which the stage was established, but it escapes [ the interior of a cylinder of supporter material 4a has become with the stage and it escapes from (b),

and ], and attachment and detachment of stop member 4b can be performed easily.

[0064] In addition, as supporter material 4a and the insertion cross-section configuration of a hole 20 are shown in drawing 4 (c) You may be the baffle configuration of a polygon c1, the irregular polygon c2, or the ellipse form c3. When it escapes by this, stop member 4b is pushed in and supporter material 4a carries out a pressure welding to a hole 20, it can prevent rotating supporter material 4a, and the baffle to the lens 2 of the member for glasses which supporter material 4a supports can be performed.

[0065] Here, although slit 4c is not illustrated to supporter material 4a in drawing 4 (c), it cannot be overemphasized that you may be the case where slit 4c is prepared.

[0066] Moreover, as for the insertion cross-section configuration of supporter material 4a joined to glasses components, usual may be circular, although the insertion cross-section configuration of the hole 20 of a lens 2 is the square of a baffle configuration as a configuration which performs a baffle as shown in the perspective view of drawing 5 (a). In this case, it escapes from the insertion hole four a1 of supporter material 4a with which it escapes and stop member 4b is inserted, and it is formed in the cross-section configuration of the ellipse form of the same magnitude as stop member 4b.

[0067] In such a configuration, although it inserts and escapes from supporter material 4a to a hole 20 and stop member 4b is stuffed into supporter material 4a like the cross section shown in drawing 5 (b), supporter material 4a is extent whose diameter is expanded minutely, and supporter material 4a will rotate to a hole 20, or it will escape from and come out of it.

[0068] It is there, next after fixing supporter material 4a with a fixture etc. to a hole 20, it escapes and stop member 4b is rotated 90 degrees. Then, like the cross section shown in drawing 5 (c), supporter material 4a carries out deformation which pushes on an illustration longitudinal direction and spreads, and it carries out a pressure welding to an illustration longitudinal direction to a hole 20.

[0069] This thing [ escaping and rotating stop member 4b ] is easily possible by escaping and rotating \*\*\*\* four b1 of 1 of a stop member 4b back end side by the minus driver, and the approach that otherwise it is well-known can be used for it.

[0070] Therefore, while the configuration shown in drawing 5 also connects a lens 2 and glasses components easily, the baffle of the glasses components to a lens 2 can be performed.

[0071] Moreover, since glasses components can rotate supporter material 4a and can change the connection include angle to a lens 2 freely, they can adjust the connection include angle of the glasses components connected with a lens 2, and can be fixed, until it escapes with this configuration and rotates stop member 4b.

[0072] On the other hand, drawing 6 (a), (b), (c), and (d) are examples applicable to the gestalt of these other operations which fall out and show various configurations of stop member 4b. The potato screw in which (a) does not have a ball and (b) does not have the seat, and (c) are the cross sections of the pin which prepared the break in the length-of-penetration direction for every predetermined spacing so that a part without the need protruded from supporter material 4a by the insertion degree to supporter material 4a could be cut off easily. (d) is the cross section of the screw of the shape of a taper whose diameter is expanded as it is pushed in, damages the front face inside supporter material 4a, and bites.

[0073] Furthermore, supporter material 4a is inserted from lens 2 background, and you may make it stuff into supporter material 4a omission stop member 4b which is a pin with the ornament member 10 from lens 2 side front, as shown in drawing 7 .

[0074] Since, as for pushed-in omission stop member 4b, only the ornament member 10 projects outside at this time, the design nature of glasses 1 can be raised.

[0075] Moreover, since there is a possibility that the glasses components connected with the connection implement 4 may carry out [ especially ] rotation etc. to the fixed position of a lens 2 according to external force by one-point support, as shown in drawing 2 , it is good [ the connection implement 4 ] to establish a bracing prevention means to insert in the 2nd hole 21 of a lens 2 the projection 11 prepared in glasses components, and to fix according to an individual.

[0076] Since glasses components are supported with the connection implement 4 and a bracing prevention means while the immobilization to the lens 2 of glasses components serves as two-point support and becomes certain by this, the burden of the connection implement 4 is mitigable to external force.

[0077] As mentioned above, although the gestalt of this operation explained the case where glasses components were connected to a lens 2, it may be the case where glasses components are connected with a front frame

which was explained with the conventional technique to a rim in the glasses which have a rim using the hole 20 prepared in the rim.

[0078] (Gestalt of the 2nd operation) The gestalt of the 2nd operation is shown in drawing 8 . With the gestalt of implementation of the above 1st, although supporter material 4a was a cartridge-like, in the gestalt of this operation, it is a column and is supporter material 4a which put in the break from the edge.

[0079] Since it is the gestalt and identitas of the 1st operation about other configurations and operations, the sign same about the same component is attached and the explanation is omitted.

[0080] As shown in drawing 8 (a), supporter material 4a is prepared at \*\* 3 tip, and is putting the break into the character of 1 from the edge.

[0081] This supporter material 4a is inserted in the hole 20 of a lens 2, tabular falls out, and stop member 4b is stuffed into the character break of 1 of the supporter material 4, fits in, extends supporter material 4a, and carries out a pressure welding to a hole 20.

[0082] Even if it is such a configuration, by escaping like the gestalt of the 1st operation and stuffing stop member 4b into the interior of the break of supporter material 4a, the pressure welding of the supporter material 4a peripheral face can be carried out to a hole 20, it can fix, and the same effectiveness can be acquired.

[0083] In addition, as shown in drawing 8 (b), the break of a cross joint can also be put in from the edge of supporter material 4a.

[0084] Moreover, a bracing prevention means as shown in drawing 2 is established, the cross-section configuration of a hole 20 and the column of supporter material 4a can be prepared in a polygon like drawing 4 (c), and a baffle can also be performed.

[0085] (Gestalt of the 3rd operation) The gestalt of the 3rd operation is shown in drawing 9 . Although supporter material 4a fell out from the opposite side the side inserted in the hole 20 of a lens 2 and was pushing in stop member 4b with the gestalt of the above 1st and implementation of two, with the gestalt of this operation, it escapes from said and stop member 4b is pushed in.

[0086] Since it is the gestalt and identitas of the 1st operation about other configurations and operations, the sign same about the same component is attached and the explanation is omitted.

[0087] As shown in drawing 9 , supporter material 4a is inserted in a hole 20 from lens 2 background, a pin etc. falls out in the state of drawing 9 after the insertion (b), stop member 4b is stuffed into supporter material 4a from the lens background of this direction, and supporter material 4a is fixed to a lens 2.

[0088] Moreover, as supporter material 4a is inserted in a hole 20, and falls out from lens 2 side front, stop member 4b may be made to be stuffed into supporter material 4a in this direction and it is shown in drawing 10 in this case In order to keep suitable the appearance after escaping and inserting stop member 4b, stop member 4b is used, and from lens 2 side front, supporter material 4a is inserted in the hole 20 of a lens 2, it escapes [ a pin with the ornament member 10 etc. falls out, and ] from it, and you may make it also stuff stop member 4b into the supporter material 4 interior from lens 2 side front.

[0089] Thus, it is also possible to escape the direction which inserted supporter material 4a in the hole 20, and from said, and to push in and carry out fitting of the stop member 4b.

[0090] Moreover, the thickness of a lens 2 is thick and it becomes possible, when the path-of-insertion die length of supporter material 4a is short to make it connect, without being influenced by the thickness of a lens 2.

[0091] (Gestalt of the 4th operation) The gestalt of the 4th operation is shown in drawing 11 . With the gestalt of this operation, it escaped from the both ends of supporter material 4a of the cylinder which bent the tabular member, and stop member 4b was inserted and it has fitted in.

[0092] Since it is the gestalt and identitas of the 1st operation about other configurations and operations, the sign same about the same component is attached and the explanation is omitted.

[0093] Supporter material 4a of the gestalt of this operation has bent the tabular member in the cylinder, and slit 4c covering both ends is prepared.

[0094] And connection immobilization is carried out by inserting supporter material 4a in the hole 20 of a lens 2 like the gestalt of the 1st operation, escaping to supporter material 4a in the condition, and pushing in stop member 4b.

[0095] Here, it escapes from the both ends which carried out opening for dehiscence to supporter material 4a, and stop member 4b is pushed in. At this time, one lens 2 side front falls out, and stop member 4b is a pin with

ornament member 10.

[0096] Thus, two things for which it escapes and stop member 4b is pushed in from a lens 2 table flesh side are also possible.

[0097] Moreover, slit 4c may be prolonged according to an individual from each edge.

[0098] (Gestalt of the 5th operation) The gestalt of the 5th operation is shown in drawing 12. The bridge section 7 and the putt arm section 9 are made to connect through a lens 2 with the gestalt of this operation. That is, supporter material 4a was joined to either the bridge section 7 or the putt arm section 9, it escaped on another side and stop member 4b is joined.

[0099] Since it is the gestalt and identitas of the 1st operation about other configurations and operations, the sign same about the same component is attached and the explanation is omitted.

[0100] Supporter material 4a of the gestalt of this operation has the shape of same cartridge as the gestalt of the 1st operation, and is prepared in the two putt arm sections 9.

[0101] Moreover, it escapes, stop member 4b is prepared in the two bridge sections 7, and it is the pin which has a ball-like projection at a tip.

[0102] And fitting of the supporter material 4a of the putt arm section 9 is inserted and carried out to two holes 20 of a lens 2, and connection immobilization is carried out by escaping to supporter material 4a in the condition, and pushing in stop member 4b.

[0103] While being able to connect the bridge section 7 and the putt arm section 9 through a lens 2, being able to decrease the linkage over a lens 2 by this and being able to improve design nature, the assembly workability of glasses 1 can be improved.

[0104] In addition, the combination of junction of the connection implement 4 to the bridge section 7 and the putt arm section 9 can be changed into the combination of supporter material 4a, escaping and joining stop member 4b, respectively at the bridge section 7 and the putt arm section 9.

[0105] (Gestalt of the 6th operation) The gestalt of the 6th operation is shown in drawing 13. Drawing 13 (a) is [ drawing after connection and drawing 13 (c) of drawing before connection and drawing 13 (b) ] the A-A sectional views of (b).

[0106] In drawing 13, the lens 2 and the Temple section 5 of glasses 1 are connected with the connection implement 4. Here, since it is the same configuration as the gestalt of the 1st operation, glasses 1 omit the explanation.

[0107] The connection implement 4 which connects the lens 2 and the Temple section 5 of a gestalt of this operation consists of silicone 12 as supporter material 4a and a resistance member, and omission stop member 4b.

[0108] Supporter material 4a is cylindrical, has the through tube 13 penetrated in the diameter direction, and is inserted in the hole 20 of a lens 2 from lens 2 background. This supporter material 4a is equipped with slit 4c prolonged from a path-of-insertion tip to a through tube 13.

[0109] The Temple section 5 is directly inserted in a through tube 13, holds to it the part by which insertion support was carried out rotatable, and achieves to it the duty of the hinge which enables closing motion of the Temple section 5.

[0110] When it is formed by the member of the shape of a rod of a cross-section round shape and insertion support is carried out at the through tube 13 of supporter material 4a, the Temple section 5 has bent and prepared the tip which inserted in the through tube 13 of the Temple section 5 stopper 5s which contacts lens 2 rear face, if the Temple section 5 opens to predetermined opening, in order to prevent that the Temple section 5 opens too much.

[0111] Moreover, silicone 12 is a cylindrical shape-like and contacts the Temple section 5 (rotation shaft) by which was stuffed into the interior of supporter material 4a, and insertion support was carried out at the through tube 13.

[0112] It escapes, and stop member 4b is stuffed into the interior of supporter material 4a which is the projectile configuration to which the back end outer diameter is large rather than the supporter material 4a bore, and pushed in silicone 12, fits in, extends supporter material 4a, and carries out the pressure welding of the supporter material 4a to a hole 20.

[0113] When how to connect a lens 2 and the Temple section 5 is explained, the Temple section 5 is inserted in the through tube 13 of supporter material 4a, and supporter material 4a is made to carry out insertion support of

the Temple section 5 first with the connection implement 4 by the configuration explained above.

[0114] Next, silicone 12 is stuffed into the interior of supporter material 4a, and the supporter material 4a is inserted in a hole 20. At this time, supporter material 4a is inserted to extent to which the Temple section 5 does not damage lens 2 rear face in contact with lens 2 rear face.

[0115] And where supporter material 4a is inserted in a hole 20, it escapes, and from lens 2 side front, stop member 4b is stuffed into supporter material 4a, and carries out fitting.

[0116] The path of supporter material 4a can extend, the diameter of it is expanded by pushing of this omission stop member 4b, supporter material 4a carries out a pressure welding to a hole 20, and it is fixed to a lens 2.

[0117] As mentioned above, with the gestalt of this operation, while being able to make a lens 2 and the Temple section 5 connect easily, the duty of the hinge whose closing motion of the Temple section 5 is enabled by connection can be given.

[0118] Moreover, before escaping and stuffing stop member 4b into supporter material 4a, silicone 12 is pushed in, silicone 12 was made to contact the rotation part (rotation shaft) inserted in the through tube 13 of the Temple section 5, and the sliding friction at the time of closing motion of the Temple section 5 (struggle) is produced.

[0119] It can change and escape from the pushing direction die length of silicone 12, the contact force to the rotation shaft of the Temple section 5 by pushing of stop member 4b can be changed, and a sliding friction can be adjusted.

[0120] Furthermore, the opening of the Temple section 5 can be adjusted by changing the stopper 5s bending direction.

[0121] In addition, insertion support is carried out at the through tube 13 of supporter material 4a, and the Temple section 5 can be opened and closed freely, and is \*\*\*\*ed, and the part (rotation shaft) by which insertion support is carried out can also prepare it in a sector rotatable good or an ellipse cross-section configuration.

[0122] (Gestalt of the 7th operation) The gestalt of the 7th operation is shown in drawing 14 . Drawing 14 (a) is drawing before connection, and drawing 14 (b) is drawing after connection.

[0123] In drawing 14 , the lens 2 and the Temple section 6 of glasses 1 are connected with the connection implement 4 like the gestalt of the 6th operation.

[0124] The connection implement 4 which connects the lens 2 and the Temple section 5 of a gestalt of this operation consists of supporter material 4a and omission stop member 4b.

[0125] Supporter material 4a is plate-like [ with the bigger back end of the path of insertion ] than the width of face of a hole 20, and if inserted in the hole 20 of a lens 2 to a predetermined location, it will be inserted more than it.

[0126] It was inserted in the hole 20 at this supporter material 4a, and the slot 14 is formed at the tip of the path of insertion out of which it extracts and comes to lens 2 background.

[0127] The width of face of supporter material 4a which escapes from this slot 14, can add stop member 4b, falls out into a slot 14, and added stop member 4b becomes larger than the width of face of a hole 20.

[0128] Moreover, it escapes and stop member 4b is Temple section 5 tip which is the member of the shape of a bent rod.

[0129] Explanation of the approach with which a lens 2 and the Temple section 5 are made to connect with this connection implement 4 inserts supporter material 4a in the hole 20 of a lens 2 from lens 2 side front first.

[0130] After supporter material 4a is inserted to the predetermined location which is not inserted any more, Temple section 5 tip falls out into the slot 14 of supporter material 4a at the tip of the path of insertion out of which it extracted and came to lens 2 rear face, and stop section 4b is made to add to it, and it is made to carry out fitting.

[0131] The part which extracted and came out to lens 2 rear face can extend supporter material 4a which falls out and added stop member 4b to the slot 14 by this, and it becomes larger than the width of face of a hole 20, and supporter material 4a carries out the pressure welding of the hole 20, and it is fixed to a lens 2.

[0132] At this time, the Temple section 5 which it escapes, and stop member 4b has become rotatable in the condition of being added to the slot 14, therefore falls out, and has stop member 4b is supported free [ closing motion ].

[0133] Thus, with the gestalt of this operation, while being able to connect a lens 2 and the Temple section 5

easily, it can escape by connection and the duty of a hinge which enables closing motion of the Temple section 5 can be given to stop member 4b.

[0134] Moreover, the condition of escaping and having made stop member 4b adding to the slot 14 of supporter material 4a escapes from the repulsive force of supporter material 4a which deformed on slot 14 both sides, and stop member 4b has received it, it escapes from it, stop member 4b is inserted, and the sliding friction is given. That is, the sliding friction at the time of closing motion of the Temple section 5 (struggle) is produced.

[0135] Furthermore, since a lens 2 and the Temple section 5 are made to connect as shown above and there are no glasses components used as excessive thickness when the Temple section 5 is folded up, the die length to the connection implement 4 which achieves the duty of a hinge from the 2nd page of a lens is short, and can fold up thinly.

[0136] In addition, it is good to prevent escaping from a slot 14, escaping, bending and escaping from a stop member 4b tip, in order that stop member 4b may fall out and come out, and coming out, when it escapes and stop member 4b slides in the illustration vertical direction. At this time, stopper 5s may be prepared at Temple section 5 tip like the gestalt of the 6th operation, and the opening of the Temple section 5 may be decided.

[0137] A cap may be attached in others by adhesion, welding, or the bell and spigot, or it may escape and you may prevent [ \*\*\*\* / preparing the cross-section configuration at the tip of stop member 4b in a polygon ] preparing only the part which falls out and is pinched in a minor diameter level difference, escaping from it, and coming out.

[0138]

[Effect of the Invention] This invention is having had the supporter material joined to at least one glasses component among the bridge section, \*\*, the putt arm section, and the Temple section. Since it escapes with supporter material, and it fits in and glasses components can connect a stop member easily to a lens or a rim Since it escapes and direct external force is not applied to the stop member itself while the bolting activity of a troublesome bolt like before or a nut becomes unnecessary, and connection is easy, and improving assembly-operation nature and being able to aim at a cost cut, the connection stabilized for a long period of time is maintainable.

[0139] Supporter material is prepared in the shape of a cartridge, it escapes, and it is pushed into the interior of the cylinder of supporter material, and it makes [ a stop member makes the diameter of supporter material expand, carries out a pressure welding to a hole, and ] connection possible.

[0140] Supporter material is having had the slit, deformation of diameter expansion and diameter reduction becomes possible easily, and supporter material can perform easily attachment and detachment of the supporter material to a hole etc.

[0141] Supporter material is having formed gradation in the interior of a cylinder, since it escapes and a stop member is pushed in to the part of a stage, it pushes in too much and escapes, and it becomes impossible to take out a stop member, and escapes easily, and pushing of a stop member and ejection are made possible.

[0142] It is having bent the plate and formed in the shape of a cartridge, and supporter material can bend a slit, and can prepare it at the time of processing, and its processing working efficiency is good.

[0143] It can prevent that glasses components rotate by the joining segment to a lens or a rim by having formed in the baffle configuration which prevents that supporter material rotates the cross section of supporter material and a hole to a hole.

[0144] It escapes, and by all being stuffed into the interior of the cylinder of supporter material, it can escape, a stop member can disappear completely, and a stop member can feel an appearance refreshed, and can improve design nature.

[0145] It is escaping, and cutting the part which does not have the need using a break, after preparing a break at intervals of predetermined in the direction in which a stop member's is stuffed into the interior of the cylinder of supporter material, escaping and pushing in a stop member at supporter material, and since it can push into the part which falls out and does not have the need for a stop member by applying the force, assembly-operation nature is improved. Moreover, after pushing in, it cuts by the break and design nature is improved. Furthermore, also when it escapes and the amounts of pushing of a stop member differ, it can cut by the break according to it.

[0146] By having prepared the projection inserted in the 2nd hole prepared in the lens or the rim at the glasses components to which supporter material was joined, two-point support of glasses components can be

performed, it prevents rotating by the joining segment, supporter material and the force which falls out and is applied to a stop member are reduced by half, and connection can be made firm.

[0147] By the thing which was joined by which of the supporter material joined to either the bridge section or the putt arm section, and the bridge section and the putt arm section, or another side and which fell out and was equipped with the stop member, the bridge section and the putt arm section can be connected with coincidence through a lens or a rim, and reduction of components mark and the increase in efficiency of assembly operation can be attained.

[0148] Since the Temple section is supported free [ rotation ] while the bolting activity of a troublesome bolt like before or a nut becomes unnecessary, and connection is easy, and improving assembly-operation nature and being able to aim at a cost cut by supporting the Temple section, enabling free rotation, since it escapes with supporter material, and it fits in and glasses components can connect a stop member easily to a lens or a rim, supporter material can simplify the configuration of glasses.

[0149] Supporter material is having had the resistance member which gives a sliding friction in contact with the Temple section supported free [ rotation ], and can obtain the sliding friction at the time of closing motion of the Temple section easily with a simple configuration.

[0150] It is that escape and a stop member is held free [ rotation ] to supporter material at the time of fitting. Since it escapes with supporter material, and it fits in and the Temple section can connect a stop member easily to a lens or a rim While the bolting activity of a troublesome bolt like before or a nut becomes unnecessary, and connection is easy, and improving assembly-operation nature and being able to aim at a cost cut, it escapes by connection, the stop member itself can be held free [ rotation ], the duty of a hinge can be achieved, and the configuration of glasses can be simplified. Moreover, it can escape from the repulsive force by fitting of supporter material, a stop member can receive, and the sliding friction at the time of closing motion of the Temple section can be obtained.

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[Translation done.]

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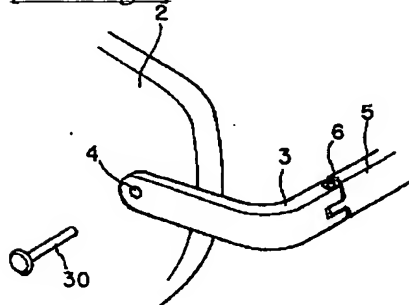
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- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

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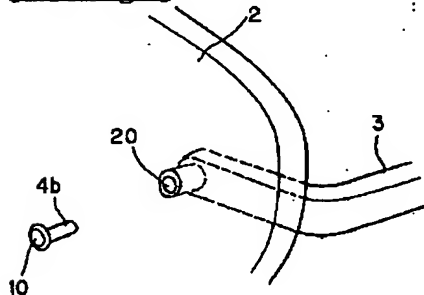
DRAWINGS

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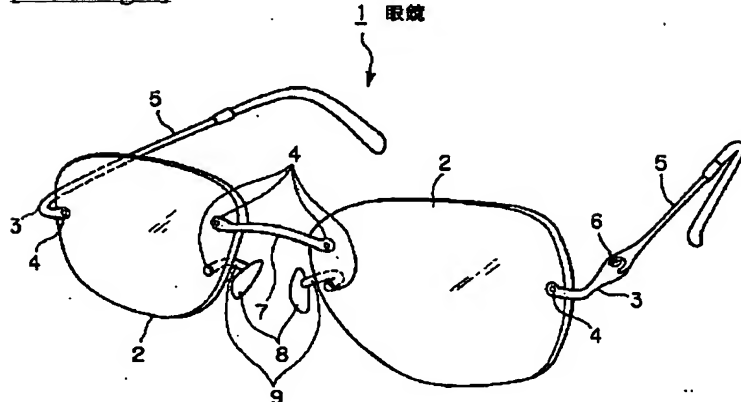
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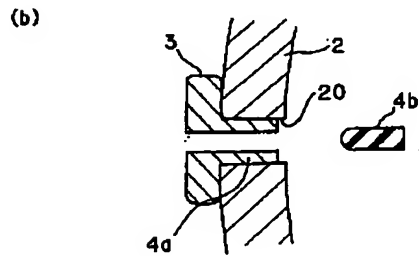
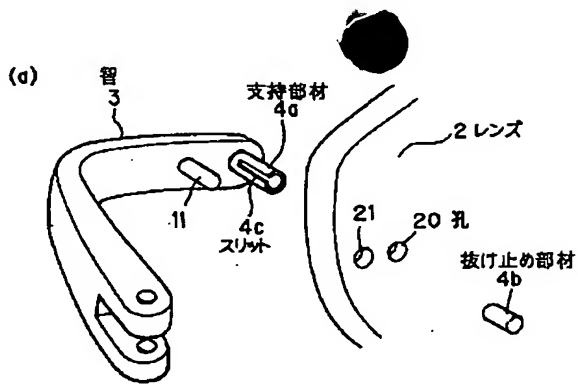
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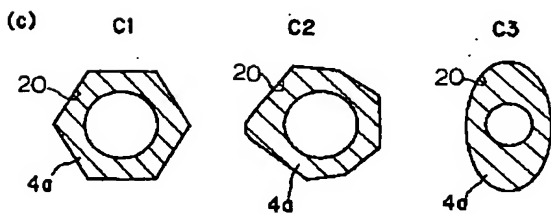
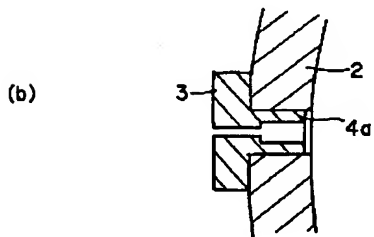
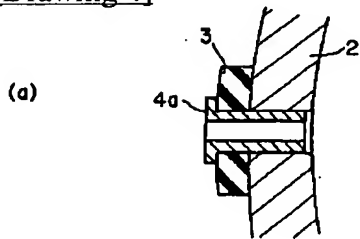
[Drawing 1]



[Drawing 2]



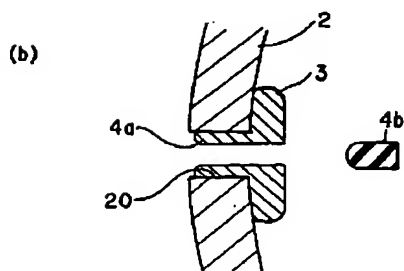
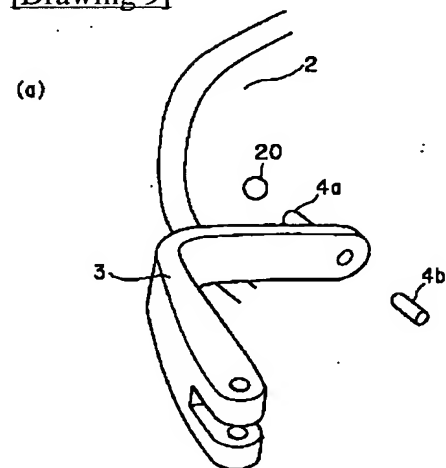
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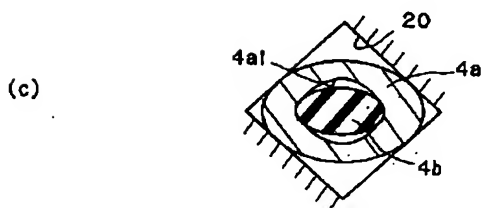
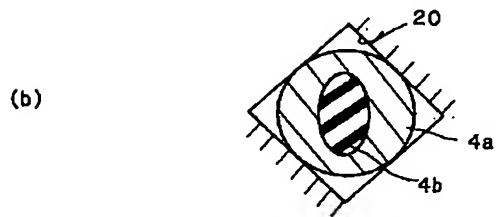
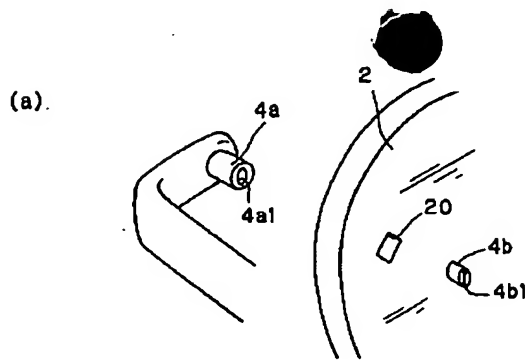
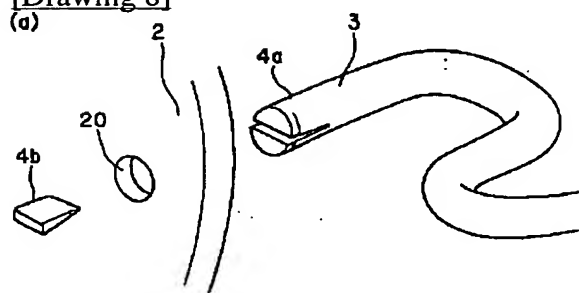
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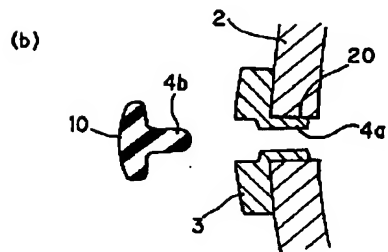
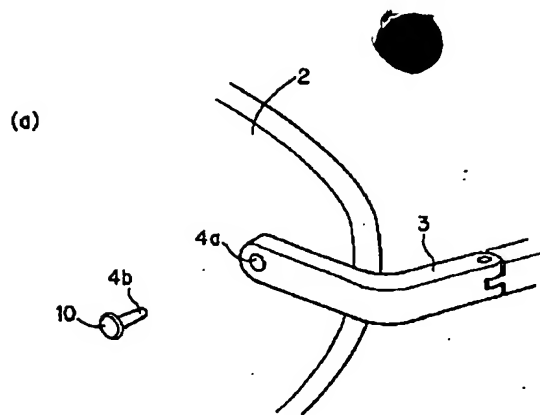


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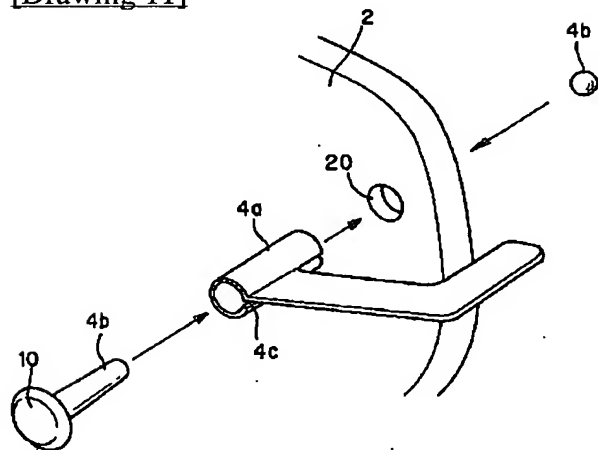


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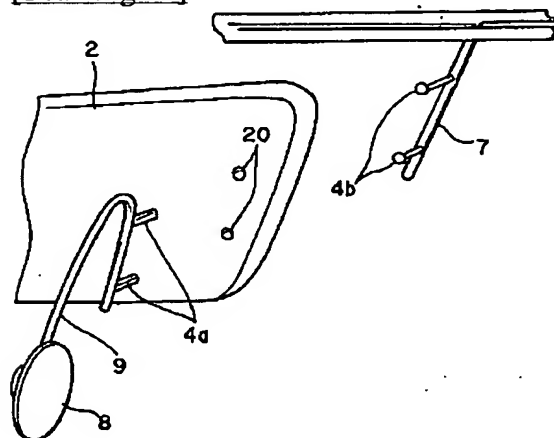
[Drawing 8][Drawing 10]

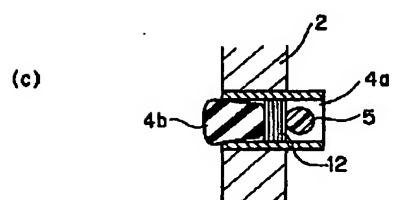
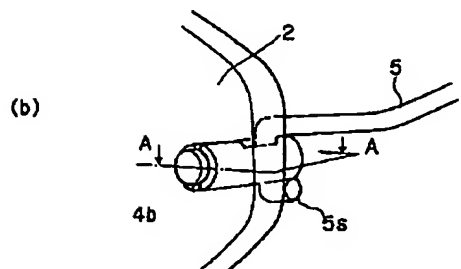
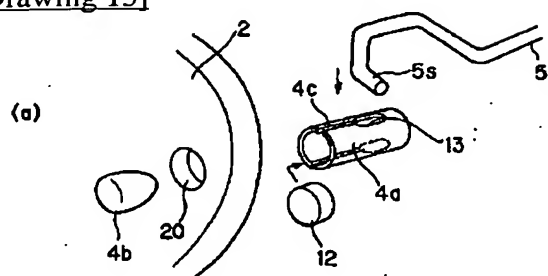
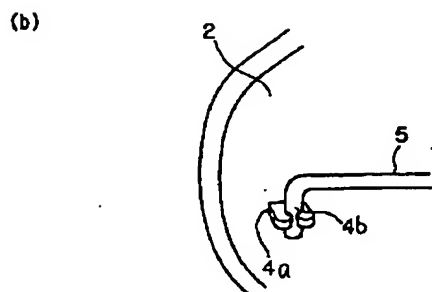
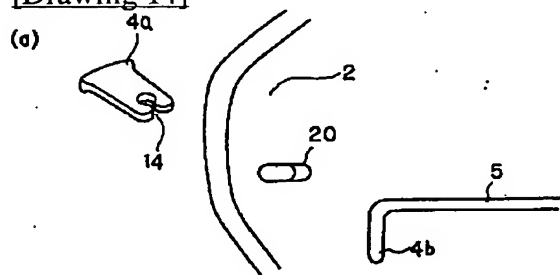


[Drawing 11]

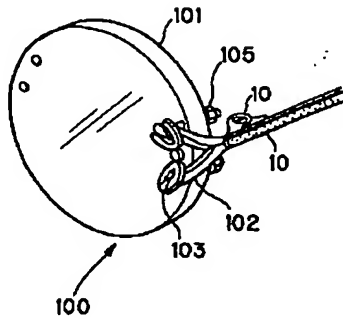


[Drawing 12]

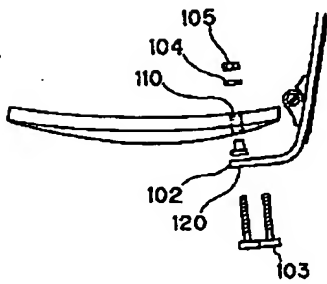


[Drawing 13][Drawing 14][Drawing 15]

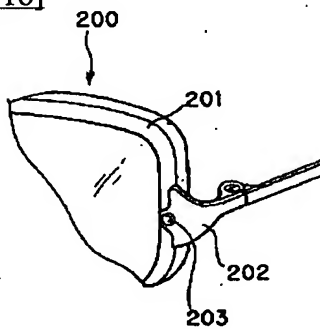
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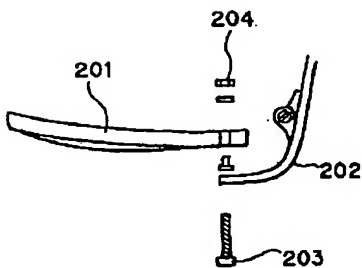
(b)

[Drawing 16]

(a)



(b)



[Translation done.]



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